

A COMPARATIVE RISK ANALYSIS OF ISLAMIC AND NON ISLAMIC BANK IN INDONESIA FROM 2004 TO 2014 USING FINANCIAL RATIOS

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Abstract. The development and growth of Islamic finance in Indonesia has gone rapidly since it started in 1990. The Islamic finance has cover banking industry, made Islamic banks and Islamic Business Unit (UUS) that is under the control of established banks. As Islamic banks got stronger in the market, it concluded that Islamic Banks have to compete against conventional banks and other type of bank in Indonesia. Therefore, this study analyzed the financial performance of Islamic or Sharia banks, compared with conventional banks in Indonesia. This study will focus on risk ratio of Islamic banks and conventional banks. This study study 78 (observation) islamic banks, 232 Islamic Business Unit (UUS) and 1227 Non Islamic Banks in Indonesia during 2004-2014 with risk ratios, which are Deposits to Assets (DTA), Equity Multiplier (EM), Equity to Deposits (ETD), Total Liabilities to Equity (TLE), Total Liabilities to Shareholder Capital (TLSC), and Retained Earnings to Assets (RETA). The data collected are secondary data which obtained from Otoritas Jasa Keuangan (OJK), include the income statement, balance sheet, statement of change in stockholders' equity, and statement of cash flows. The findings shows there are differences between eight ratios that are used for the study. Findings from the calculation in previous chapter shows that Islamic Banks are statistically less risky than Non Islamic Banks, especially from 2004-2008, 2012 and 2014, based on the mean and median results. The results happen because of the change in risk components within the studied banks through years. Plus, there are also few changes in number of banks included in the calculation in 2009-2011 and 2013, that cause a difference from other studied years.

Keywords: Islamic bank, Risk, Ratio Analysis

Introduction

The implementation of islamic banking has been spreaded to many countries, which also happened in Indonesia. In accordance to Aliludin (1990), islamic finance era starts at Bandung in the beginning of 1980s as one of divisions in Koperasi Jasa Keahlian Teknosa called Baitut Tamwil has been developed in 1984. At Jakarta in 1988, Koperasi Ridho Gusti follows Baitut Tamwil to become the second islamic financial institution in Indonesia. Majelis Ulama Indonesia makes a Lokakarya Bunga Bank dan Perbankan at Bogor, which result the decision to make a working team for the early development of Islamic Bank in Indonesia. Finally in 1992, first islamic financial institution in the forms of banking has been made and known as Bank Muamalat, made by the MUI's working team (Azis, 1992:25). Since then, dual banking system, where there are islamic and Non Islamic banks operate side by side.

According to Bank Indonesia's (BI) official website (www.bi.go.id, 2008), it stated that BI already prepare the blueprint of Islamic Banking development in Indonesia from 2002. By that preparation, it shows that Indonesia's national bank support and ready to develop Islamic Banks for the future.

As it explained in the previous section, Islamic banks and Non Islamic banks have a relationship in the form of dual banking system. This system is applied within Indonesia Banking Architecture (API) corridor. As stated by Bank Indonesia (www.bi.go.id), Islamic and Non Islamic banks are deployed together to increase the national economy sector and become the backup or alternative to mobilize customer's money.

In accordance to Syafi'ul Antonio, Muhammad (2011), Islamic banking and Non Islamic banking have the same vision to make profits through lending capital fund operations and deposits, or other adequate banking activities. But recently, as the Islamic banks getting stronger, it caught the attention of conventional financial market. Conventional banks are Non Islamic banks that is the main system in banking industry. Based on Helmy, Muhammad (2012), more than 250 Islamic financial institutions in over 45 countries are increasing at a rate of higher than 15 percent annually for the past five years. In Indonesia, there were six Islamic banks (BUS), 25 Islamic business Unit (IBU), 138 Islamic Rural Banks (BPRS) and 1223 Islamic banking offices are spreaded in the year of 2009.

Asosiasi Perbankan Syariah Indonesia set the target of Islamic Banking growth around 20% in 2015. This target is very high, while the market share of Islamic Banks still 4.85% in 2014 based on *Statistik Perbankan Indonesia*. The target is set that high because of the comparison with other country such as Malaysia that could develop Islamic banking performance much better than in Indonesia. One thing that has to be increased is the performance of Islamic Banking, which related to financial performance. According to Peterson, Pamela (2012), financial performance could be analyzed by gathering the issues in the institution, such as employee performance, efficiency of operations, credit policies, and externally to evaluate potential investment, and the creditworthiness of borrowers. To determine the stability and performance of bank, it may need many different methods. But, the purpose of bank is gather and distribute public's money or funds, also to maintain the development of national economic growth and people's standard living. By that purpose, to make the banks continue to benefit other parties, bank has to maintain their performance, especially in maximizing profit, minimizing operating cost and maintain the risk management. The results of Islamic Banks and Non Islamic Banks performance is affected with several differences between the these two concepts, such as in profit taking, lending money, interest, deposit guarantee, and risk sharing.

Literature Review

Islamic Bank in Indonesia

The first Islamic bank in Indonesia was established in 1992, Bank Muamalat. Further development of Islamic banks rather late compared to other Muslim countries. Bank Muamalat Indonesia was born as a result of banking team made by MUI. Certificate of incorporation of PT Bank Muamalat Indonesia was signed on November 1, 1991. At the time of signing the deed is collected commitment to purchase shares as much as 84 billion. With an initial capital of 106 billion, Bank Muamalat started operating. Until 1999, Bank Muamalat has more than 45 outlets in Jakarta, Bandung, Semarang, Balikpapan and Makassar. Legal basis for the operation of banks that is used by Islamic system make it categorized as a bank with a profit-sharing system.

However, although in 1992-1998 there is only one Islamic bank unit, in 2005 the number of Islamic banks in Indonesia increased to 20 units, ie three Islamic banks and 17 Islamic business units. meanwhile, the number of Sharia Rural Bank (BPRS) until the end of 2004 increased to 88 pieces.

In the reform era, the Islamic banking system is discussed in detail in Undang-Undang No.10 Tahun 1998. Due to high public enthusiasm for sharia system, ranging from the conventional commercial banks in 1999 started to open Islamic branches. Starting from IFI banks open Islamic branches that start on June 28, 1999.

In view of providing a wider banking services alternative to Indonesian economy, the development of Islamic banking in Indonesia is implemented under dual banking system in compliance with the Indonesian Banking Architecture (API). Islamic banking and conventional banking systems jointly and synergically support a wider public fund mobilization in the framework of fostering financing capability of national economic sectors.

The characteristic of Islamic banking operation is based on partnership and mutual benefits principle provides an alternative banking system with mutual benefits both for the public and the bank. This system give priorities to aspects related to fairness in transaction and ethical investment by underlining the values of togetherness and partnership in production, and by avoiding any speculative activity in financial transaction. By providing various products and banking services supported by variative financial scheme, Islamic banking will be a credible alternative that can be benefited by all of Indonesian people without exception.

In the context of macroeconomic management, an extensive use of various Islamic financial products and instrument help attaching financial sector and real sector and create harmonization between the two sectors. In addition to support financial and business the widely use of islamic product and instrument also reduce speculative transactions in thus the economy supports the stability of overall financial system. At the end, the Islamic banking significantly contribute to the achievement of mid-long term price stability.

The enactment of Act no. 21 of 2008 issued on July 16, 2008 has provided a more adequate legal base to the development of Islamic banking in Indonesia ,and consequently will accelerate the growth of the industry. With an impressive development progress reaching an annual average asset growth of more than 65% in the last five years, it is expected that Islamic banking industry will have a more significant role in supporting national economy.

Islamic Banking Product

Islamic Banks' product can be divided into three, which are financing, funding, and banking.

Financing Products

The distribution of fund could be divided into 4 principles, which are the purchase, lease, profit sharing, and a complementary contract.

The principle of buying and selling occurs with the transfer of ownership of the goods or objects. Bank profit rate is determined at the front and become part of the price of goods sold. There are three types of buying and selling as distinguished from forms of payment and delivery time.

- Financing Murabaha: Sale and purchase transactions in which the bank puts the profits. The selling price is the purchase price plus the bank of the supplier profits.
- Financing Salam: sale and purchase transaction where goods are bought and sold does not exist. Therefore, the goods are delivered in a tough interim payment was made in cash. Bank acting as buyers, while customers as a seller. The quality, quantity, price and delivery time to be determined exactly. The selling price set by the bank is the bank of the customer purchase price plus profit.
- Financing Istishna ': Resembling of greetings products, but in Istishna' Dapa payments made by the bank in several installments. Generally applied in the manufacturing and construction financing. Agreed sales price stated in the contract Istishna 'and should not be changed during the validity of the contract.

The principle of Ijarah or lease a system characterized by the transfer of benefits. This principle is similar to the principle of buying and selling, but distinct from the object of the transaction. If the object is the buying and selling of goods, or the Ijara is a lease object services. At the end of the lease, the bank can only sell the goods which she rented to customers.

Shirkah principle or the sharing system can be divided into several forms.

Musharaka financing: The desire of the parties to work together to increase the value of their assets together. All forms of business that involves two or more parties in which they jointly integrate all forms of resources.

Mudaraba: This form of cooperation between two or more parties where owners of capital to the amount of capital trust managers with a profit-sharing agreement. This form is a combination of financial capacity owners of capital and expertise property manager.

Complementary contract includes other activities in the banks, which are:

- Hiwalah (Transfer of debts)
- Rahn (mortgage)
- Qardh (loan money)
- Wakalah (Representative)
- Kafalah (Bank Guarantee)

Saving Products

Funding may take the form of demand deposits, savings deposits, or deposits. Operating principle applied in fund raising community is Wadiah and Mudharabah principle.

- Wadiah Saving: Sparing in light of wadiah contract comprises of wadiah reserve funds and other sparing items. Wadiah sparing is sparing with convenient and resolutely withdrawal in light of propelled contract and concurred conditions. It can't withdraw with check or equivalent saving money items.
- Mudharaba Savings: Sparing in light of mudharaba contract comprises of sparing mudharaba and other investment funds. Mudharaba sparing is adaptably withdrawal in view of concurred particular contract. It likewise can't withdraw with check or equivalent keeping money items.

Banking

Islamic banks can also do various banking services to customers of the rewarded with a lease or profit. The banking services such as:

- Sharf (Sale and Purchase of Foreign Exchange): Sale and purchase of currencies that are not of this type, delivery should be done at the same time.
- Ijarah (Lease): Rental deposit box and governance services administration documents.

Differences of Non Islamic and Islamic Bank

Non Islamic banks and Islamic Banks may have the same purpose; to provide all financial activities. But, in terms of the system and technical approach, there are many differences between them. Lewis and Algoud (2007) conclude that Islamic banks and Non Islamicbanks have two core differences. The first one, which considered as the biggest difference of them by Lewis and Algoud (2007), is the elimination of usury which makes the bank to implement the new operational methods is a profit sharing scheme. The second is that the funds collected from the public is basically used for public's matters. Because Islamic banking transactions never operate only to get profit, but also concerned to public interest.

Islam are well-known with the Halal requirement and it also applied in Islamic banking. Every steps, including any forms of financing or investment between the bank and other institution are made based on halal principles. Certainly, all non-halal businesses such as drugs, alcohol and gamble are strictly prohibited. For the future market, Islamic banks has to decline speculative transactions or excessive risk as an investment, in accordance to Haniffa and Hudaib (2007).

There are four points that is become the rule to develop Islamic banking product to prohibit usury actions (Karim, 2004), which are:

- Rule of sale, such as for financing murabaha, salam and istisna
- Rule of leasing (ijara)

- Rule of profit sharing, such as musharaka financing or mudaraba
- Rule of contract, rather than debts, liens, borrowing money (qardh), representation (of attorney) and bank guarantees (kafalah).

Concept of Risk Management

Based on H. Keidling's book, Economics of Banking, as it has been seen repeatedly in the previous chapters, the business of a financial intermediary is closely interwoven with risk, to the extent that the bank is earning its income by taking on specific forms of risk. It follows that the success or failure of the bank is connected with its ability to handle risk, both the basic forms of risk on which money is earned and the less easily identified forms of risk which were not contemplated in the basic business transactions. Not surprisingly also the regulation of banks has to do with the risk that banks are running and how to control them.

Risk management in Islam messaged through Al-Quran, surah Yusuf: verse 67; "O my kids, don't enter the capital of Egypt by one entryway however go into it by diverse doors. Nonetheless, know it well that I can't avert you Allah's will for none other than He has nay power at all. In Him I have put my trust an all who need to depend upon anybody ought to put their trust in only him". It likewise expressed in hadith based on Prophet Muhammad s.a.w; Prophet (peace be upon him) once asked a Bedouin who had left his camel loosened without any tie, "Why don't you not tie your camel?" the Bedouin replied, "I put my trust in God." The prophet then said, tie up your camel first then put your trust in God."

Methodology

Methods

Research methodology is the illustration of process to get procedures to find the facts. This research implements several steps in doing this research. First, this research determines the research topic and learns about it. Next is identifying the problems and conduct theoretical foundation based on literature. Third, this research collects the data and analyzes it in order to solve the problem identification. The last step is summarizing and concluding the analyzed data and making recommendation from it.

Data Collection

This research analyzed the data with secondary data from banks in Indonesia. The data is divided into two groups of banks, which are Islamic banks and Non Islamic banks. The annual reports are collected from Otoritas Jasa Keuangan. These data contained income statement, balance sheet, statement of change in stockholders' equity, and statement of cash flows. The data is collected from every bank's annual financial reports in 2004-2014.

Table 1 List of Banks

Year	Non Islamic	IBU (IBU)	Islamic Banks
2004	125	10	3
2005	125	12	3
2006	104	17	3
2007	105	22	3
2008	111	20	5
2009	108	20	6
2010	110	19	11

2011	109	19	11
2012	108	23	11
2013	108	21	11
2014	106	21	12
Total	1219	204	77

Data Analysis

This research uses Financial Ratios Calculations, Descriptive Statistic and Mann-Whitney test to analyze and process the data that had been collected before. The financial ratios for this research are as following:

Risk Ratio

The following ratios are used for this research to determine the risk ratio of Islamic and Non Islamic banks.

1. DTA (Deposits to Assets) =
$$\frac{\text{Total Customer Deposits}}{\text{Average Total Assets}}$$
2. EM (Equity Multiplier) =
$$\frac{\text{Total Assets}}{\text{Shareholder Equity}}$$
3. ETD (Equity to Deposits) =
$$\frac{\text{Shareholders Equity}}{\text{Customer Total Deposits}}$$
4. TLE (Total Liabilities to Equity) =
$$\frac{\text{Total Liabilities}}{\text{Stockholders Equity}}$$
5. TLSC (Total Liabilities to Shareholder Capital) =
$$\frac{\text{Total Liabilities}}{\text{Shareholder Contributed Capital}}$$
6. RETA (Retained Earnings to Total Assets) =
$$\frac{\text{Retained Earnings}}{\text{Average Total Assets}}$$

If Islamic banks are riskier than Non-Islamic banks, they may hold more cash about assets or deposits. Since Islamic banks do not use debt financing, it would expected that shareholder equity to be a larger source of funds about Non Islamic banks. Therefore, TLE and TLSC should be smaller for Islamic banks.

With this method, this research also need three things that need to be calculated which are mean, standard deviation, and t-test. The t-test is needed because this research is comparing the performance of Islamic and Non Islamic banks in Indonesia.

Research Result

In this chapter, there are eight ratios calculated for the period of 11 years. Those ratios are used to determine the mean, median, standard deviation, and Mann-Whitney test that lead to conclusion whether there is significant difference between Non Islamic Banks and Islamic Banks or not. Table 4.17 is presented to summarize the data from this chapter.

Table 4.14 Summary

	DTA	EM	ETD	TLE	TLSC	RETA
2004	N	N	N	N	I	I
2005	N	N		N	I	N
2006	N	I	N	I	I	I
2007	N	I	N	I	I	N
2008	N	I		I	I	N
2009	N	N		N	I	I
2010	N		I			
2011	N	N		N		N
2012	N	I		I		
2013	N		N			N
2014	N					

I Average score (mean) of Islamic Banks are statistically significant less risky than Non Islamic Banks.

N Average score (mean) of Non Islamic Banks are statistically significant less risky than Islamic Banks.

Rejected hypothesis area.

In analyzing the ratio, a higher number does not mean higher riskier. For ETD and RETA, a higher ratio means less risky. On the other hand, for DTA, EM, TLE and TLSC, a higher ratio means riskier. The results are:

- For Deposit to Assets ratio, Islamic Banks is considered riskier than Non Islamic Banks.
- For Equity Multiplier ratio, Islamic Banks is considered riskier than Non Islamic Banks.
- For Equity to Deposits ratio, Islamic Banks is considered riskier than Non Islamic Banks.
- For Total Liabilities to Equity ratio, Islamic Banks is considered riskier than Non Islamic Banks.
- For Total Liabilities to Shareholder Capital ratio, Islamic Banks is considered less risky than Non Islamic Banks.
- For Retained Earnings to Assets ratio, Islamic Banks is considered riskier than Non Islamic Banks.

In terms of liabilities, the most influent factors are deposits and wadiah savings. Both factors have significant ratio numbers that signifies it's heavy influence to the total liabilities. Table 4.14 it shows that in the first year, all ratios show significance difference between Non Islamic Banks and Islamic Banks. But in 2005, there are no significance difference in ETD and TLSC. There are 2 Islamic Banks number of banksto the calculation compared with the first year calculation, while Non Islamic Banks have no changes in amount. In 2008, it shows there is no significant difference in ETD, while in 2009 the situation is the same. This may happen because of the change of number of banks, where both Non Islamic banks and Islamic Banks have increase in number of banks in 2008. In 2010-2012, it shows that TLSC have no significant difference. This may happen because of the change of number of banks, where Non Islamic banks have decrease in amount and Islamic Banks have increase in amount. In 2013 and 2014, EM, TLE and TLSC have no significant difference. This may happen because of the change of number of banks, where both Non Islamic banks and Islamic banks have decrease in amount. To summarize this chapter, according to risk ratios, Islamic Banks are riskier than Non Islamic Banks. Islamic Banks are significantly riskier than Non Islamic Banks in Deposits to Assets ratio, Equity Multiplier ratio, Equity to Deposits ratio, Liabilities to Equity ratio, and Retained

Earnings to Asset ratio. There are several components that are crucial and make Islamic Banks riskier, which are shareholder equity, total assets and total liabilities.

Conclusion

There are few points that is concluded as the findings of this research, also to answer the research questions. As follows:

- Islamic Banks are statistically significant riskier than Non Islamic Banks in terms of DTA ratio during the period of 2004-2014.
- Based on p value, there are significant differences between Non Islamic Banks and Islamic Banks in DTA Ratio during the period 2004 to 2014.
- Islamic Banks are statistically significant riskier than Non Islamic Banks in terms of EM ratio during the period of 2004-2014.
- Based on p value, there are significant differences between Non Islamic Banks and Islamic Banks in EM Ratio from 2004 to 2009, also in 2011 and 2012.
- Islamic Banks are statistically significant riskier than Non Islamic Banks in terms of ETD ratio during the period of 2004-2014.
- Based on p value, there are significant differences between Non Islamic Banks and Islamic Banks in ETD Ratio in several years, which are in 2004, 2006, 2007, 2010 and 2013.
- Islamic Banks are statistically significant riskier than Non Islamic Banks in terms of TLE ratio during the period of 2004-2014.
- Based on p value, there are significant differences between Non Islamic Banks and Islamic Banks in TLE Ratio from 2004 to 2009, also in 2011 and 2012.
- Islamic Banks are statistically significant less risky than Non Islamic Banks in terms of TLSC ratio during the period of 2004-2014.
- Based on p value, there are significant differences between Non Islamic Banks and Islamic Banks in TLSC Ratio from 2004 to 2009.
- Islamic Banks are statistically significant riskier than Non Islamic Banks in terms of RETA ratio during the period of 2004-2014.
- Based on p value, there are significant differences between Non Islamic Banks and Islamic Banks in RETA Ratio from 2004 to 2009, also in 2011 and 2013.

Findings showed that Islamic Banks are riskier than Non Islamic Banks. The results happen because of the change in risk components within the studied banks throughout the years.

Recommendation

The growth of Islamic finance has been drastic through years since the beginning of Islamic finance era in Indonesia. The population of Muslim in Indonesia also noted as one of the largest in the world. There is a big opportunity to develop and expand Islamic finance. But, to make the prospect of Islamic finance brighter in the future, there are few things that have been noted and need to be addressed.

This research focuses on the risk ratio between Non-Islamic Banks and Islamic Banks. Regarding risk, the issues are in Equity Multiplier and Total Liabilities to Equity. This is because the results for Equity Multiplier (EM) and Total Liabilities to Equity (TLE) calculation shows that Non-Islamic Banks mostly dominate and become less risky than Islamic Banks. To make it less

risky, increasing Equity and Shareholder Capital and decreasing Total Assets and Total Liabilities can do an improvement. But, increasing Equity could lead to less effectiveness of the bank. So instead of increasing the Equity, Islamic Banks should decrease the Total Liabilities and Total Assets. This step is useable for Islamic finance, especially in banking, to be less risky than Non-Islamic Banks and be a better financial institution.

For further research, improvement for similar research could be divided in several points, which are:

- Measure the factor that will affect risk ratio and the domination of Islamic Banks in banking market.
- Identify the most important ratio to determine risk rate.
- Identify the relationship between risk ratio and market share.

References

- Aliludin, A. (1990). Standarisasi tingkat pembagian keuntungan usaha bersama yang bersifat massal dan dinamis: analisis konseptual terhadap riba dan bunga bank dengan pendekatan hukum Islam dan manajemen industri, Bachelor Theses, Universitas Islam Bandung.
- Antonio, Syafi'i. (2001) Bank Syariah: Dari Teori ke Praktik. *Gema Insani Press*.
- Bank Indonesia.(1998), 'Islamic Banking Statistics December 1998', Directorate of Islamic Banking Bank Indonesia, Jakarta.
- Faturahman, T. (2013). The examination of the growth of Islamic Banking in Indonesia from 2003 to 2010. *Curtin University*.
- Herliana, D. (2013). Comparing determinant of profitability between Islamic and conventional Banks in Indonesia. *Institut Teknologi Bandung*.
- Karim, A. (2004). Bank Islam – Analisis Fiqih dan Keuangan, p:65-70, 256. *Jakarta: PT Raja Grafindo Persada*.
- Olson, D & Zoubi, TA 2008, 'Using accounting ratios to distinguish between Islamic and conventional banks in the GCC region', *The International Journal of Accounting*, vol. 43, pp. 45–65.
- (2015). Statistik Perbankan Indonesia, (Mei). Jakarta. Otoritas Jasa Keuangan.
- The structure of Banking. (Last access: 2015, December 11, 22:14) Retrieved from www.bi.go.id/en/perbankan/arsitektur/struktur/